بسم رب الذی خلق المهدی

Date: ۲۶ Subject: ستایش مراقی زادی

(۱) $S = 64$ — $\frac{1}{2} \times 4k \times 4k \times \sin 150 = 64 \Rightarrow 4k^2 = 64 \Rightarrow k^2 = 16 \Rightarrow k = 4\sqrt{2}$

$P = 5k \Rightarrow P = 20\sqrt{2}$

(۲) $\left| \left(\frac{1}{2} AD \times AE \sin A\right) - \left(\frac{1}{2} AB \times AC \sin A\right) \right| = 1,75$

$\sin A \left| AD \times AE - (AB \times AC) \right| = 3,5$

$\sin A \left| \frac{7 \times 4}{28} - \frac{5 \times 7}{35} \right| = 2,5$

$7 \sin A = \frac{7}{2} \Rightarrow \sin A = \frac{1}{2} \Rightarrow A = 30^\circ$

$\tan 30 = \frac{\sqrt{3}}{3}$

(۳) $\frac{1}{|\cos\alpha|} - \frac{\sin\alpha}{\cos\alpha} = \frac{1+\sin\alpha}{|\cos\alpha|} \Rightarrow \tan\alpha \ominus$

$\frac{|\sin\alpha|}{\cos\alpha} = -\frac{\sin\alpha}{\cos\alpha} \Rightarrow \sin\alpha \ominus$

ناحیه چهارم

$|\text{شیب}| = \frac{3}{4} \Rightarrow \tan\alpha = -\frac{3}{4}$ — $-\cot\alpha = ? = +\frac{4}{3}$ (۴)

(۵) $\frac{-3\sin\alpha - 2\sin\alpha}{-\sin\alpha - \sin\alpha} = \frac{-5}{-2} = \frac{5}{2}$ — $\alpha = 12^\circ$

Date: Subject:

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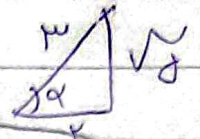
$\tan\alpha = -\frac{\sqrt{5}}{2}$



$$\frac{\cos\alpha + \sin\alpha}{\left|\frac{5}{4}-1\right|} = \frac{\frac{\sqrt{5}-2}{3}}{\frac{1}{4}} = \frac{4(\sqrt{5}-2)}{3}$$

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$\sin^2\alpha + \cos^2\alpha = 1 \Rightarrow 4c^2 + c^2 = 1 \Rightarrow c = -\frac{\sqrt{5}}{5}$

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$\sin 4\alpha = \frac{2M}{1-M^2} = \sqrt{3} = \tan 4\alpha$

$\sqrt{3}M^2 + 2M - \sqrt{3} = 0 \xrightarrow{\div\sqrt{3}} M^2 + \frac{2\sqrt{3}}{3}M - 1 = 0$

$M = \frac{-\frac{2\sqrt{3}}{3} \pm \sqrt{\frac{4}{3}+4}}{2} \Rightarrow$ اختلاف $= \frac{\sqrt{5}}{a} = \frac{\frac{4}{\sqrt{3}}}{1} = \frac{2\sqrt{3}}{3}$

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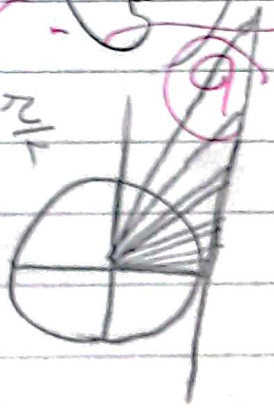
$\frac{\pi}{4} - x = \alpha \qquad -\frac{\pi}{4} < -x < \frac{\pi}{4} \Rightarrow 0 < \alpha < \frac{\pi}{2}$

$0 < \tan\alpha < +\infty$

$0 < \frac{1-M}{2+M} < +\infty$

$(M < 1)$



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$-\sqrt{2}\cos\frac{\pi}{4} + \sqrt{3}\sin\frac{\pi}{4}$

$\frac{\sqrt{3}}{2} - \frac{\sqrt{2}}{2} = 0$

MAHAN